[Continued on next page]

(54) Title: CONNECTED AUDIO AND OTHER MEDIA OBJECTS
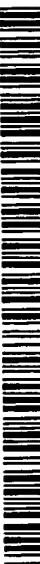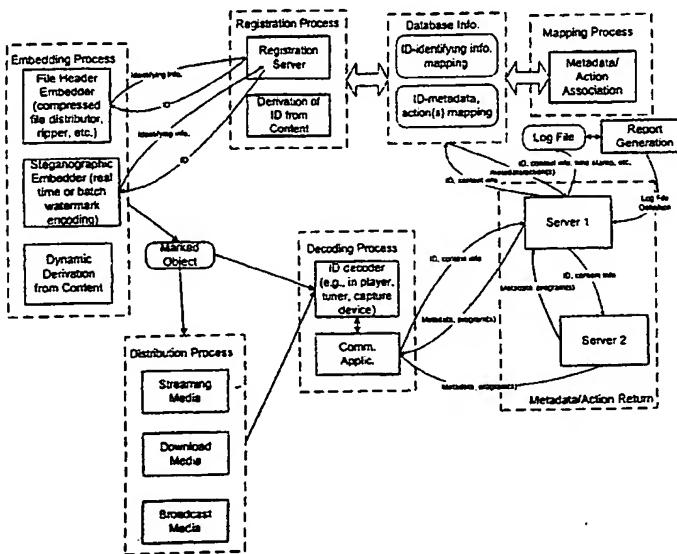
(57) Abstract: Media objects are transformed into active, connected objects via identifiers embedded into them or their containers. In the context of a user's playback experience, a decoding process extracts the identifier from a media object and possibly additional context information and forwards it to a server. The server, in turn, maps the identifier to an action, such as returning metadata, re-directing the request to one or more other servers, requesting information from another server to identify the media object, etc. The linking process applies to broadcast objects as well as objects transmitted over networks (1251, 1252) in streaming and compressed formats.

WO 01/55889 A1

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

AMENDED CLAIMS
[received by the International Bureau on 24 July 2001 (24.07.01);
new claims 61-78 added (3 pages)]

61.   A method of linking an audio signal to metadata or actions comprising:
receiving the audio signal from a user's device;
dynamically deriving an identifier from the audio signal by computing a
fingerprint of the audio signal;
mapping the identifier to an action;
executing the action, including returning data to the device for presentation of
at least a portion of the data to a user.

62.   The method of claim 61 wherein the returned data includes metadata
about the audio signal.

63.   The method of claim 61 wherein the returned data includes one or more
links to other data or an action on a network accessible via the user's device.

64.   The method of claim 63 wherein the one or more links includes a link
to an electronic transaction for purchasing a product related to the audio signal.

65.   The method of claim 63 wherein the one or more links includes a link
to a web page.

66.   The method of claim 63 wherein the one or more links includes a link
to a programmatic action for retrieving video or audio via streaming or file download
delivery.

67.   The method of claim 63 wherein the one or more links includes
searching a database for additional information related to the audio signal from
which the fingerprint is derived.

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68. The method of claim 61 wherein the fingerprint is derived from a filtered version of the audio signal.

69. The method of claim 68 wherein the fingerprint is derived from a hash of the filtered version of the audio signal.

70. The method of claim 61 wherein mapping the identifier to an action includes using context information from the user's device to determine the action.

71. The method of claim 70 wherein the context information includes user information and the returned data is determined at least in part on the user information.

72. The method of claim 70 wherein the context information includes play time of the audio signal and the returned data is determined at least in part on the play time.

73. The method of claim 70 wherein the context information includes device information of the user's device and the context information is used to determine the type of data to be returned for rendering on the user's device.

74. The method of claim 61 wherein the mapping of the identifier is performed in a database that associates identifiers with actions.

75. The method of claim 74 wherein the database includes a web interface enabling user's to change an association between an identifier and an action.

76. The method of claim 74 wherein the database automatically changes actions associated with an identifier according to a rule set.

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77.   The method of claim 61 wherein the user device is a wireless phone and the returned data is sent to the wireless phone via wireless carrier.

78.   The method of claim 67 wherein the audio signal is recorded through a microphone for later extraction of the identifier.